

## CLAIMS

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2 1. An induction coil comprising a plurality of tubular members, each of said  
3 tubular members further comprising a plurality of elongate, parallel, electrically  
4 conductive strips, each of said strips having a strip length, a strip width and a strip  
5 thickness, each of said parallel electrically conductive strips being separated from  
6 adjacent parallel strips by a gap having a gap width, wherein said gap width is less than  
7 said strip thickness.

8 2. An induction coil in accordance with claim 1 wherein said gap width is less  
9 than 1 millimeter.

10 3. An induction coil in accordance with claim 1 wherein said electrically  
11 conductive strips are rectangular in cross-section.

12 4. An induction coil comprising a plurality of concentric tubular members, each of  
13 said tubular members further comprising a plurality of elongate, parallel, electrically  
14 conductive strips, each of said strips having a strip length, a strip width and a strip  
15 thickness, each of said parallel electrically conductive strips being separated from  
16 adjacent parallel strips by a gap having a gap width, wherein said gap width is less than  
17 said strip width and said strip thickness, and wherein at least one electrically conductive  
18 strip on one said tubular member is in electrical communication with an electrically  
19 conductive strip on a different tubular member.

20 5. An induction coil in accordance with claim 4 wherein said gap width is less  
21 than 1 millimeter.

1           6. An induction coil in accordance with claim 4 wherein said electrically  
2     conductive strips are rectangular in cross-section.

3           7. An induction coil in accordance with claim 5 wherein said electrically  
4     conductive strips are rectangular in cross-section.

5           8. A method for making an induction coil comprising the steps of:

6           (a)       presenting first and second sheets of an electrically conductive  
7                    material having a plurality of electrically conductive strips  
8                    thereon, each of said strips on said first and second sheet being  
9                    separated from an adjacent strip by a slot therebetween; then

10          (b)       placing said first sheet adjacent said second sheet such that said  
11                    strips on said first sheet lie within said slots on said second  
12                    sheet; then

13          (c)       rolling said first and second sheets to form a first cylinder  
14                    having an inner diameter; then

15          (d)       forming a second cylinder in accordance with steps (a) – (c)  
16                    having an outside diameter that is less than said inner diameter  
17                    of said first cylinder; then

18          (e)       disposing said second cylinder within said first cylinder in axial  
19                    alignment therewith; then

1 (f) forming electrical connections between said conductive strips  
2 on said first cylinder and conductive strips on said second  
3 cylinder.

4 9. The method of claim 8 further comprising the step of wrapping said second  
5 cylinder with at least one layer of glass fiber prior to disposition of said second cylinder  
6 within said first cylinder.

7 10. The method of claim 8 further comprising impregnating and encapsulating  
8 said first and second cylinders in a resin following step (f).

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